

N-56094

Seat No. _____

M. Sc. (Part-II) Examination

April / May – 2003

Biomedical Technology : Paper-VI

(Molecular & Clinical Genetics)

Time : 3 Hours]

[Total Marks : 75

**NB: All questions carry equal marks.
All questions are compulsory.
Illustrate your answers with neat diagrams wherever necessary**

1. Write an account on: a). Structural polymorphism in DNA
b). Nuclear pore complex

OR

1. Write an account on: a). Polygenic and multifactorial inheritance
b). Mendelian principles of inheritance
2. Describe: a). Chromosome identification techniques
b). Numerical chromosomal disorders

OR

2. Describe: a). Chemical mutagenesis
b). Fluorescence in situ hybridisation
3. Write notes on: a). Vectors in Recombinant DNA technology
b). Modified PCR techniques

OR

3. Write notes on: a). Amniocentesis
b). DNA fingerprinting and its applications
4. Describe: a). Gene diversity in Immunoglobulins
b). Maxam and Gilbert method of Gene sequencing

OR

4. Describe: a). Mismatch and recombination repair mechanisms
b). Chromosomes and cancer
5. Write short notes on **Any three** of the following:

- a). Solenoid model
- b). Sex chromatin
- c). Southern blotting
- d). DNA footprinting
- e). Enzymes in DNA replication
- f). Hybridoma technology